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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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7590

08/19/2003

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14
EXAMINER

WILKINS III, HARRY D

ART UNIT

PAPER NUMBER

1742

DATE MAILED: 08/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/965,946

Applicant(s)

MIZIA ET AL.

Examiner

Harry D Wilkins, III

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-- Th MAILING DATE of this communication appears on the cover sheet with the correspondenc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-20,23,25 and 26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-20,23,25 and 26 is/are allowed.
- 6) ☒ Claim(s) 11-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ziolkowski (US 3,362,813) in view of Wachter et al (US 4,010,375) and Rudnick et al (US 5,926,516).

Ziolkowski teaches (see col. 2, lines 7-28) an austenitic stainless steel alloy used for high thermal neutron absorption with the following composition by weight: 0.2-3% Gd, 2-26% Cr, up to 4% Mo, up to 10% Mn, 3.5-22% Ni, 5-25% ferrite, up to 1% P and S, up to 0.25% C, up to 2% Si, and up to 0.7% N. The alloy is cast into an ingot form. It is inherent that the stainless steel of Ziolkowski reads on a poisoned member, since the steel absorbs neutrons (see col. 1, lines 8-10). Wachter establishes that it is well known in the art that a poison is the same as a neutron-absorbing material (see col. 1, lines 37-38). However, Ziolkowski does not specifically disclose that the poisoned member comprises a spent nuclear fuel storage system as claimed.

Rudnick et al teach (see col. 4, line 1-4) an absorption structure that is used in a fuel assembly storage basin of a nuclear reactor to receive spent fuel assemblies. The structure is made from austenitic steels (see col. 3, lines 64-67), and the structure can contain Gd. It would have been obvious to one with ordinary skill in the art at the time

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the invention was made that the alloy of Ziolkowski would be used as part of a spent nuclear fuel storage system, since Rudnick et al teach that absorber parts permit compact storage of neutron-emitting components, especially fuel assemblies, from nuclear reactors (see col. 1, lines 18-25).

3. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ziolkowski (US 3,362,813) in view of Wachter et al (US 4,010,375) and Rudnick et al (US 5,926,516) as applied to claim 11 above, and further in view of Shaffer et al (US 4,292,528).

The teachings of Ziolkowski, Wachter et al and Rudnick et al are described above in paragraph no. 9.

However, Ziolkowski does not disclose that the claimed poisoned member, which is comprised of the steel alloy taught by Ziolkowski, is an internal as claimed in claim 12, a canister as claimed in claim 13, or both an internal and a canister as claimed in claim 14 (as defined in the present specification on page 9, paragraph 23).

Shaffer et al teach (see figure 1) a cask for radioactive material such as spent nuclear reactor fuel. The walled internal compartments 31, 33 and 35 absorb neutrons (see col. 1, lines 60-61 and col. 2, lines 64-65). Compartment walls 55 and 57 have parts that serve as bearers of neutron-absorbing material (see col. 2, line 67 to col. 3, line 7). Regarding the parts of claims 12-14, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the stainless steel taught by Ziolkowski could be used in the cask components of Shaffer et al, since Shaffer et al teach that the cask material could be made from stainless steel (see col. 7, lines 7-24 of

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Shaffer et al). Also, Ziolkowski meets the requirement in Shaffer et al (col. 7, lines 20-21) for corrosion resistance.

Response to Arguments

4. Applicant's arguments filed 1 July 2003 have been fully considered but they are not persuasive. Applicant argued that Ziolkowski teaches a wrought stainless steel which is different from the claimed cast stainless steel.

In response to Applicant's argument, though Ziolkowski teaches that the final state of the alloy is a wrought microstructure, Ziolkowski teaches (see col. 4, line 5) casting of the alloy. Though further processing occurs, the stainless steel of Ziolkowski is cast. Thus, the stainless steel of Ziolkowski meets the claim limitation that the stainless steel is cast. In addition, as can be seen from the claims of Ziolkowski, patent protection was sought for wrought articles of the alloy and for the alloy itself. Ziolkowski merely teaches that the alloy may be wrought or forged, not that it must be. It would have been within the expected skill of a routineer in the art to have used the alloy of Ziolkowski in an as-cast form when the benefits of a wrought or forged structure were not need (i.e.-strengthening).

Allowable Subject Matter

5. Claims 15-20, 23, 25 and 27 are allowed. Please see paper no. 12 for the reasons for allowance.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry D Wilkins, III whose telephone number is 703-305-9927. The examiner can normally be reached on M-Th 10:00am-8:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V King can be reached on 703-308-1146. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Harry D Wilkins, III
Examiner
Art Unit 1742

hdw
August 15, 2003

ROY KING
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700